CLAIMS

1. A method for designing, deploying and optimizing a communications network, comprising the steps of:

generating a computerized model of a space, said space having a plurality of different objects therein each of which has attributes which impact performance of a communications network;

modeling performance attributes of a plurality of different components which may be used in said communications network;

specifying components from said plurality of different components to be used in said communications network;

specifying locations within said space for a plurality of different components in said computerized model; and

predicting a performance metric for said communications network, said performance metric being selected from the group consisting of throughput, error rates, packet latency, packet jitter, symbol jitter, quality of service, security, coverage area, bandwidth, bit error rate, packet error rate, frame error rate, dropped packet rate, queuing delay, capacity, bandwidth delay product, handoff delay time, signal-to-interface ratio, signal-to-noise ratio, physical equipment price, and installation cost.

2. The method of claim 1 wherein said computerized model generated in said generating step includes objects which create noise, said noise being an attribute of said object which is factored in said predicting step.

3. The method of claim 1 wherein said performance metric predicted in said performing step is predicted in a forward direction in said communication network.

4. The method of claim 1 wherein said performance metric predicted in said performing step is predicted in a reverse direction in said communication network.

5. The method of claim 1 wherein said computerized model is three dimensional.

6. The method of claim 1 further comprising the step of specifying data transfer protocol, and wherein said predicting step uses a specified data transfer protocol as a factor in predicting said performance metric.

7. The method of claim 1 further comprising the step of specifying a network loading for said communications network, and wherein said predicting step uses a specified network loading in predicting said performance metric.

8. The method of claim 1 further comprising the steps of

measuring said performance metric for said communications network within said space; and

modifying predictions made in said predicting step based on measurements made in said measuring step.

9. A method for designing, deploying and optimizing a communications network, comprising the steps of:

generating a computerized model of a space, said space having a plurality of different objects therein each of which has attributes which impact performance of a communications network;

modeling performance attributes of a plurality of different components which may be used in said communications network;

specifying components from said plurality of different components to be used in said communications network;

specifying locations within said space for a plurality of different components in said computerized model;

predicting a performance metric for said communications network; and

using a table look up to relate empirically measured network performance metrics to a predicted performance metric.

10. The method of claim 9 wherein said performance metric is selected from the group consisting of throughput, error rates, packet latency, packet jitter, symbol jitter, quality of service, security, coverage area, bandwidth, bit error rate, packet error rate, frame error rate, dropped packet rate, queuing delay, capacity, bandwidth delay product, handoff delay time, signal-to-interface ratio, signal-to-noise ratio, physical equipment price, and installation cost.

11. A method for designing, deploying and optimizing a communications network, comprising the steps of:

generating a computerized model of a space, said space having a plurality of different objects therein each of which has attributes which impact performance of a communications network;

modeling performance attributes of a plurality of different components which may be used in said communications network;

specifying components from said plurality of different components to be used in said communications network;

specifying locations within said space for a plurality of different components in said computerized model;

using a table look up of empirically measured network performance metrics to predict a performance metric.